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Attn: Document Control Desk  
United States Nuclear Regulatory Commission  
Washington, DC 20555-0001

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
DOCKET NO. 50-261/RENEWED LICENSE NO. DPR-23

LICENSEE EVENT REPORT NO. 2011-002-00  
REACTOR TRIP DUE TO A FAILED RELAY COIL ON RCP-3-X(B) AND ACTUATION  
OF AUXILIARY FEEDWATER SYSTEM

Ladies and Gentlemen:

The attached Licensee Event Report is submitted in accordance with the requirements of 10 CFR 50.73. Should you have any questions regarding this matter, please contact William R. Hightower at (843) 857-1329.

This document contains no new Regulatory Commitments.

Sincerely,

A handwritten signature in black ink, appearing to read 'Thomas S. Cosgrove'.

Thomas S. Cosgrove  
Plant General Manager  
H. B. Robinson Steam Electric Plant, Unit No. 2

PSF

Attachment

c: Mr. Victor McCree, NRC, Region II  
B. L. Mozafari, NRC, NRR  
NRC Resident Inspector

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NRR



**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
H. B. Robinson Steam Electric Plant, Unit No. 2	05000261	YEAR	SEQUENTIAL NUMBER	REV. NO.	2 OF 3
		2011	- 002	- 00	

**NARRATIVE****I. DESCRIPTION OF EVENT**

At 1145 hours EDT on September 26, 2011, with H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, while in Mode 1 at approximately 100% power, an automatic reactor trip occurred. At the time of the trip, the control room received a "One Loop Low Flow" alarm [EIS System:Component IB:FA] indicating that the 'C' Reactor Coolant Pump (RCP) [AB:P] had shut down. The Reactor Protection System (RPS) [JC] tripped the reactor on an input that breaker 52/14 [AB:BKR], for RCP 'C,' had opened. Verification of plant conditions immediately following the event identified that RCP 'C' was still running and that breaker 52/14 was still closed. The false indication signal, from relay RCP-3-X(B) [JC:RLY] was the source of the RPS trip signal. RCP-3-X(B) is a Westinghouse relay, Model NBFD66S.

The Auxiliary Feedwater System [BA] automatically actuated, as expected, due to low steam generator [SB:SG] water level, and provided feedwater to the steam generators. The steam generator and pressurizer [AB:PZR] Power Operated Relief Valves (PORVs) [AB:RV] and the Main Steam Safety Valves [SB:RV] did not open during the event. All control rods [AB:ROD] fully inserted following the reactor trip.

**II. CAUSE OF EVENT**

This event has been investigated in accordance with the HBRSEP, Unit No. 2, Corrective Action Program (CAP) and is documented in Nuclear Condition Report (NCR) 490203. The investigation concluded that the reactor trip was due to a defective coil lead wire, as supplied by the vendor, on the RCP-3-X(B) relay.

**III. SAFETY SIGNIFICANCE**

This event had minor safety significance. It did result in a reactor trip, which challenges safety systems; however, all safety systems responded appropriately to this event.

**IV. CORRECTIVE ACTIONS**Completed Corrective Actions:

- Relay RCP-3-X(B) was replaced and post maintenance testing was performed. Relays at risk for a similar failure were also replaced.

Planned Corrective Actions:

- Implement a Single Point Vulnerability Program to reduce plant risk.

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H. B. Robinson Steam Electric Plant, Unit No. 2	05000261	YEAR	SEQUENTIAL NUMBER	REV. NO.	3 OF 3
		2011	- 002	- 00	

**NARRATIVE**

### V. ADDITIONAL INFORMATION

Previous Similar Events:

Licensee Event Report 2006-001-00

At 0247 hours EDT on October 25, 2006, with H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, in Mode 1 at 100% power, control room operators responded to alarms received for steam flow greater than feed flow on all three steam generators. The control room operators diagnosed the event as a 100% load rejection and initiated a manual reactor trip at 0248 hours, 68.8 seconds following the start of the event. The root cause of this event was failure of a turbine governor valve electro-hydraulic control system card. While equipment failures were identified as the cause of this event, no similar component failures were identified.

Licensee Event Report 2010-007-01

At 1437 hours EDT on September 9, 2010, with H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, in Mode 1 at 100% power, an automatic reactor trip occurred. The reactor trip signal was based on the Overtemperature  $\Delta T$  (OT $\Delta T$ ) reactor protection function. The root cause of this event was a degraded connection on a circuit board (1A08H2) in the electro-hydraulic (EH) controls cabinet. This condition caused the loss of the governor valve common signal to the four turbine governor valves. Closure of the governor valves caused pressure and temperature in the Reactor Coolant System (RCS) to change. This resulted in the opening of a pressurizer PORV and the OT $\Delta T$  reactor protection function initiating a reactor trip. While equipment failures were identified as the cause of this event, no similar component failures were identified.